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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,111	03/26/2004	James Jolly Clark	5853-00505	8029

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EXAMINER	
JARRETT, RYAN A	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,111	CLARK ET AL.	
	Examiner	Art Unit	
	Ryan A. Jarrett	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/7/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 17-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a method that does not require computer implementation or use of technology to accomplish. The claims allow for the involvement of subjective human decision and therefore do not necessarily produce repeatable, concrete results.

Therefore, the language of the claims raises a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

It is not clear which device assesses the solar insolation, or which device assesses the zonal evapotranspiration, or which device assesses the irrigation need of the zone to be irrigated, or which device controls irrigation to meet the irrigation needs of the zone to be irrigated.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites, "a solar panel configured to...assess climatological conditions". There is no support for this in the specification. On page 11, lines 13-22, Applicant discloses:

> In an embodiment, a sensing unit may include one or more sensors. For example, a sensing unit may include one or more sensors designed to sense climatological conditions. In some embodiments, sensors in a sensing unit may advantageously require relatively low amounts of current. Sensors that require relatively low amounts of current may be used with stand-alone (e.g., battery powered and/or solar powered) sensing units. A sensing unit designed to sense climatological conditions may include, but is not limited to, a wind sensor, a temperature sensor, a moisture gauge, a humidity sensor, and/or a solar insolation sensor. In some embodiments, a solar insolation sensor may include a solar panel. As used herein, solar insolation generally refers to an average amount of solar radiation that radiates within a given area per unit of time.

Thus, it is the sensor (e.g., wind sensor, temperature sensor, moisture sensor, humidity sensor, and/or solar insolation sensor) that assesses the climatological conditions, not the solar panel itself. Claims 2-15 depend from claim 1 and incorporate the same deficiency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 5, 8-10, and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Peek et al. U.S. Patent No. 6,675,098. Peek et al. discloses:

1. A water irrigation system, comprising: a computer system (e.g., Fig. 4 #144); a sensing unit elevated above a zone to be irrigated (e.g., Fig. 5 #110), wherein the sensing unit comprises a solar panel configured to receive sunlight (e.g., Fig. 5 #103), to use the received sunlight to produce electricity, to supply at least a portion of the electricity to the sensing unit (e.g., col. 9 lines 45-53), and to assess climatological conditions, and wherein the sensing unit is configured to communicate wirelessly (e.g., Fig. 5 #107) with the computer system to provide output that is a function of the assessed climatological conditions to the computer system (e.g., col. 3 lines 15-24), and wherein the computer system is configured to control irrigation of the zone to be irrigated at least partially based on the output of the sensing unit (e.g., col. 4 lines 18-23, col. 9 line 45 – col. 10 line 19).

5. The water irrigation system of claim 1, wherein the computer system is configured to receive community irrigation instructions (e.g., col. 7 lines 19 – col. 8 line 3).

8. The water irrigation system of claim 1, wherein the sensing unit is configured to provide output that is a function of the received sunlight to the computer system, and wherein the computer system is configured to assess solar insolation as a function of the output of the sensing unit (e.g., col. 3 lines 15-24).

9. The water irrigation system of claim 1, wherein the sensing unit is configured to provide output that is a function of the received sunlight to the computer system, wherein the computer system is configured to assess solar insolation as a function of the output from the sensing unit (e.g., col. 3 lines 15-24), and wherein the computer system is configured to assess zonal evapotranspiration using at least the assessed solar insolation (e.g., col. 3 lines 25-49).

10. 'The water irrigation system of claim 1, wherein the computer system is configured to assess an irrigation need of the zone to be irrigated at least partially based on the assessed climatological conditions (e.g., col. 4 lines 18-23, col. 9 line 45 – col. 10 line 19).

16. A method of controlling irrigation, comprising: receiving sunlight with a solar panel (e.g., Fig. 5 #103); producing electricity from the received sunlight; using at least a portion of the electricity to assess climatological conditions with a sensing unit (e.g., col. 9 lines 45-53), wherein the sensing unit is elevated above a zone to be irrigated (e.g., Fig. 5 #110); transmitting the assessed climatological conditions wirelessly (e.g., Fig. 5 #107) to a computer system; and allowing the computer system to control irrigation of the zone to be irrigated at least partially based on the assessed climatological conditions (e.g., col. 4 lines 18-23, col. 9 line 45 – col. 10 line 19).

17. The method of claim 16, further comprising assessing solar insolation from the received sunlight (e.g., col. 3 lines 15-24).

18. The method of claim 16, further comprising assessing solar insolation based on the received sunlight (e.g., col. 3 lines 15-24) and assessing zonal evapotranspiration at least partially based on the assessed solar insolation (e.g., col. 3 lines 25-49)

19. The method of claim 16, further comprising assessing solar insolation based on the received sunlight (e.g., col. 3 lines 15-24), assessing zonal evapotranspiration at least partially based on the assessed solar insolation (e.g., col. 3 lines 25-49), and assessing an irrigation need of the zone to be irrigated at least partially based on the zonal evapotranspiration (e.g., col. 4 lines 18-23, col. 9 line 45 – col. 10 line 19).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. as applied to claim 1 above, and further in view of Haupt et al. US 2003/0154780. Peek et al. does not explicitly disclose that the weather station/sensing unit is coupled to an eave of a house. Peek does disclose that the weather station is entirely portable and that it can be moved as needed to provide optimal benefit. Additionally, Haupt discloses a weather station that can be fastened to the façade of a building. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Peek with Haupt in order to obtain accurate measurements for the wind speed, solar radiation, temperature, etc. of Peek by mounting the weather station high in the air, to provide good reception for the antenna of Peek, and to establish the weather station close to a residential garden or yard that is to be irrigated.

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. as applied to claim 1 above, and further in view of Oliver U.S. Patent No. 5,870,302. Peek et al. does not disclose that the computer system comprises an infrared transceiver. However, Oliver discloses an evapotranspiration remote irrigation control system comprising a weather station (e.g., Fig. 6 #1, Fig. 6 #6) that

communicates with a host computer (e.g., Fig. 6 #4) that is equipped with an infrared transceiver (e.g., col. 9 line 40 – col. 10 line 35). The host computer calculates evapotranspiration and calculates irrigation control data. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Peek with Oliver since Oliver teaches that wireless infrared technology is a well known and effective method of communicating from one site to another remote site.

10. Claims 11-15 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Peek et al. as applied to claims 1 and 16 above, and further in view of Moore et al. US 2004/0039489. Peek discloses that the irrigation system comprises one or more valves, conduits, irrigation devices, and a source of water (e.g., col. 9 lines 25-33, col. 11 lines 7-23). Peek does not explicitly disclose that the computer system directly controls these devices, i.e. that the computer system "meets the irrigation need of the zone to be irrigated". However, Moore discloses an irrigation control system comprising a weather station that collects weather data and wirelessly transmits the weather data to a remote computer that calculates evapotranspiration (ET) from the weather data and transmits control signals to an irrigation controller for controlling the irrigation output based on the evapotranspiration data (e.g., claims 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Peek with Moore since Moore teaches that a remote computer can be used to directly and automatically control irrigation devices based on ET data. This prevents the need for

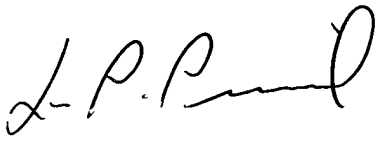
human intervention that can prevent a system from being implemented on a wide-scale basis, as taught by Moore (e.g., [0019], [0020]).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan A. Jarrett
Examiner
Art Unit 2125

12/5/04

LEO PICARD
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